ENVIRONMENTAL PROTECTION AGENCY

[EPA-HQ-OAR-2006-0340; FRL_XXXX-X]

Renewable Fuel Standard under Section 211(o) of the Clean Air Act as Amended by the Energy Policy Act of 2005

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: Section 211(o) of the Clean Air Act (the Act), as amended by the Energy Policy Act of 2005, requires the Administrator of the Environmental Protection Agency (EPA) to annually determine a renewable fuel standard (RFS) which is applicable to refiners, importers and certain blenders of gasoline, and publish the standard in the Federal Register by November 30 of each year. On the basis of this standard, each obligated party determines the volume of renewable fuel that it must ensure is consumed as motor vehicle fuel. This standard is calculated as a percentage, by dividing the amount of renewable fuel that the Act requires to be blended into gasoline for a given year by the

amount of gasoline expected to be used during that year, including certain adjustments

specified by the Act. In this notice we are publishing an RFS of 4.66% for 2008.

FOR FURTHER INFORMATION CONTACT: Chris McKenna, Environmental

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SUPPLEMENTARY INFORMATION:

I. Calculation of the 2008 RFS

A.   Background

The preamble to the final rulemaking for the Renewable Fuel Standard Program

included a projected RFS for 2008 of 4.63%. 72 FR 23912 (May 1, 2007). In today's

notice we are again using the calculational procedure from the final rulemaking to

calculate the 2008 RFS. However, since some projections and assumptions used in the

final rulemaking to calculate the projected 2008 RFS have changed, today's notice

includes a recalculated and final 2008 RFS using the most recent available information.

Since the RFS rule established clear legal criteria for deriving the standard (including

specification of the formula used in today's notice, and all data sources), EPA is simply

applying facts to pre-established law in issuing the final 2008 RFS standard. EPA is

advising the regulated community of the revised standard through a Federal Register

Notice, without prior notice and comment, in accordance with the Clean Air Act and EPA

regulations.

The 2008 RFS is calculated by dividing the volume of renewable fuels required

by the Act to be blended into gasoline in 2008, by the volume of gasoline projected by

the Energy Information Administration (EIA) to be consumed in 2008 (including certain adjustments specified by the Act). The following equation from the final RFS Program regulations summarizes all of the variables that must be considered in the calculation.

$$RFStd_i = 100 \times \frac{RFV_i - Cell_i}{(G_i - R_i) + (GS_i - RS_i) - GE_i}$$

Where

$RFStd_i =$ Renewable Fuel Standard in year i, in percent

$RFV_i =$ Annual volume of renewable fuels required by section 211(o)(2)(B) of the Act for year i, in gallons

$G_i =$ Amount of gasoline projected to be used in the 48 contiguous states, in year i, in gallons

$R_i =$ Amount of renewable fuel blended into gasoline that is projected to be consumed in the 48 contiguous states, in year i, in gallons

$GS_i =$ Amount of gasoline projected to be used in Alaska, Hawaii, or a U.S. territory in year i if the state or territory opts-in, in gallons

$RS_i =$ Amount of renewable fuel blended into gasoline that is projected to be consumed in Alaska, Hawaii, or a U.S. territory in year i if the state or territory opts-in, in gallons

$GE_i =$ Amount of gasoline projected to be produced by exempt small refineries and small refiners in year i, in gallons (through 2010 only unless exemption extended under §§ 211(o)(9)(A)(ii) or (B)).

$Cell_i =$ Beginning in 2013, the amount of renewable fuel that is required to come from cellulosic sources, in year i, in gallons (250,000,000 gallons minimum)

B.   Data Sources for 2008 RFS Calculation

The following discussion describes the sources of data for the variables in the above equation. For ease of calculation, this discussion regroups the terms $(G_i - R_i) + (GS_i - RS_i)$ in the denominator of the above equation into the terms $(G_i + GS_i) - (R_i + RS_i)$.

Calculation of $(RFV_i - Cell_i)$, total amount of renewable fuels from non-cellulosic sources that must be blended into gasoline in 2008

The Act requires 5.4 billion gallons of renewable fuels to be blended into gasoline in 2008. Because there is no cellulosic volume requirement in the Act until 2013, the amount of renewable fuel that the Act requires to be produced from cellulosic sources in 2008 ($Cell_i$) is zero. Thus the total amount of renewable fuels from non-cellulosic sources that must be blended into gasoline in 2008 is 5.4 billion gallons.

Calculation of $(G_i + GS_i)$, total amount of gasoline projected to be used in the 48 contiguous states plus opt-in states/territories, in year i, in gallons

The Act requires the Administrator of the EIA by October 31 of each year to provide EPA with an estimate of the volumes of gasoline projected to be sold or introduced into commerce in the United States for the following year. During the

development of the RFS Program, EIA informed EPA that the projected gasoline consumption in "Table 4a: U.S. Petroleum Supply, Consumption, and Inventories" (formerly "Table 5a. U.S. Petroleum Supply and Demand: Base Case") of the October issue of the monthly *Short-Term Energy Outlook* (STEO) should be used to calculate the RFS for the coming year. The October 2007 STEO projects that an average of 9.42 million barrels/day of gasoline will be consumed in all of the United States in 2008. Multiplying this average consumption rate by 366 days (2008 is a leap year) produces a total consumption of 144.80 billion gallons of gasoline in 2008.

Only one non-contiguous state or territory has petitioned EPA to opt into the RFS Program beginning in 2008. Hawaii petitioned EPA on June 22, 2007 to opt into the RFS program, and EPA approved their request.[1] Thus, Alaska is the only one of the 50 states that is not included in the RFS Program.

In order to calculate gasoline consumption in the 48 contiguous states plus Hawaii, we subtracted Alaska's projected gasoline consumption from the projected nationwide gasoline consumption of 144.80 billion gallons. Alaska's projected gasoline consumption was calculated by multiplying the projected nationwide gasoline consumption in 2008 by the ratio of Alaska's gasoline consumption in 2006 to the total U.S. consumption in 2006, based on Table 48, "Prime Supplier Sales Volumes of Motor Gasoline by Grade Formulation, PAD District, and State" gasoline data from EIA's *Petroleum Marketing Annual 2006* (the final rulemaking used data from *Petroleum*

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[1] Letter to the Honorable Laura Lingle, Governor of Hawaii, from Stephen Johnson of EPA dated July 30, 2007.

Marketing Annual 2005). According to EIA, Prime Supplier data reflects where gasoline is used, rather than where it is produced.[2] Alaska's projected gasoline consumption in 2008 is 0.30 billion gallons. Subtracting this consumption from the projected nationwide consumption of 144.80 billion gallons in 2008 produces a total consumption of 144.50 billion gallons of gasoline in 2008 in the 48 contiguous states plus Hawaii.

Calculation of (R_i + RS_i), total amount of renewable fuel blended into gasoline that is projected to be consumed in the 48 contiguous states plus opt-in states/territories, in year i, in gallons

The projected gasoline consumption in the October 2007 STEO includes renewable fuel that is blended into gasoline. This volume of renewable fuel must be subtracted from the total volume of gasoline in order to calculate the total consumption of non-renewable gasoline.   In Table 8 of the October 2007 STEO, EIA estimates that 0.755 quadrillion Btu of ethanol will be used as transportation fuel in all of the United States in 2008. Dividing this energy usage by the high heating value of ethanol (3.539 million Btu/barrel), and multiplying by 42 gallons/barrel produces a total ethanol usage of 8.96 billion gallons nationwide in 2008.

Since Hawaii has opted in, but Alaska has not opted in, to the RFS program for 2008, Alaska's renewable fuels consumption must be subtracted from the nationwide renewable fuels consumption to calculate renewable consumption in the 48 contiguous

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[2] Energy Information Administration, *Petroleum Marketing Annual 2006*, Explanatory Notes, Relationship of Refiner and Prime Supplier Sales Volumes" (p. 382).

states plus Hawaii. In Chapter 2 of the Regulatory Impact Analysis for the RFS program

rulemaking, EPA estimated that ethanol consumption in Alaska would be negligible prior

to 2012. Thus, we project renewable fuels consumption in the 48 contiguous states plus

Hawaii to be 8.96 billion gallons in 2008.[3]

Calculation of GE_i, amount of gasoline projected to be produced by exempt small refineries and small refiners in year i, in gallons[4]

In the final rulemaking, we stated that we would estimate the combined small

refinery and small refiner gasoline volume using a constant percentage of national

consumption. Using information from gasoline batch reports submitted to EPA, EIA data

and input from the California Air Resources Board regarding California small refiners,

we estimated this percentage to be 13.5%.[5] Multiplying the projected nationwide

consumption of gasoline in 2008 (144.80 billion gallons) by 13.5% results in a total

projected production of 19.55 billion gallons of gasoline from small refiners and small

refineries in 2008.

Calculation of $RFStd_i$, renewable fuel standard in year i, in percent

Substituting all of the terms calculated above into the equation for $RFStd_i$ results

in the following RFS for 2008,

$$RFStd_i = 100 \times \frac{5.4}{144.50 - 8.96 - 19.55} = 4.66\,\%$$

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[3] Table 2.2-21 "2012 Forecasted Ethanol Consumption by State," Regulatory Impact Analysis: Renewable Fuel Standard Program, April 2007.

[4] Through 2010 only, unless the exemption is extended under 211(o)(9(A)(ii) or (B) of the Act.

Therefore, the RFS for 2008 is 4.66%. This is the standard referenced in 40 CFR 80.1105(b) through (d) and which obligated parties apply to determine their renewable volume obligation under 40 CFR 80.1107.

Signed:

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Stephen L. Johnson

Administrator

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Date

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[5] "Calculation of the Small Refiner/Small Refinery Fraction for the Renewable Fuel Program," memo to the docket from Christine Brunner, ASD, OTAQ, EPA, September 2006.